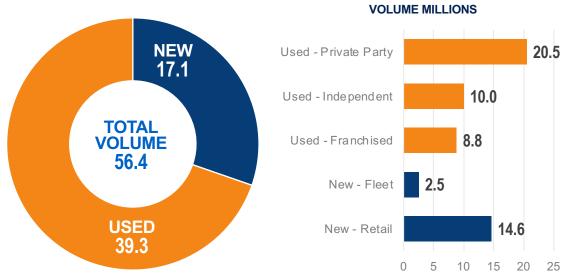
Top 10 Insights for the Auto Market

Jonathan Smoke | Chief Economist, Cox Automotive



#1: THE AUTO MARKET IS LARGE AND COMPLEX

Used vehicle sales accounted for 70% of industry volume and ~56% of value in 2017

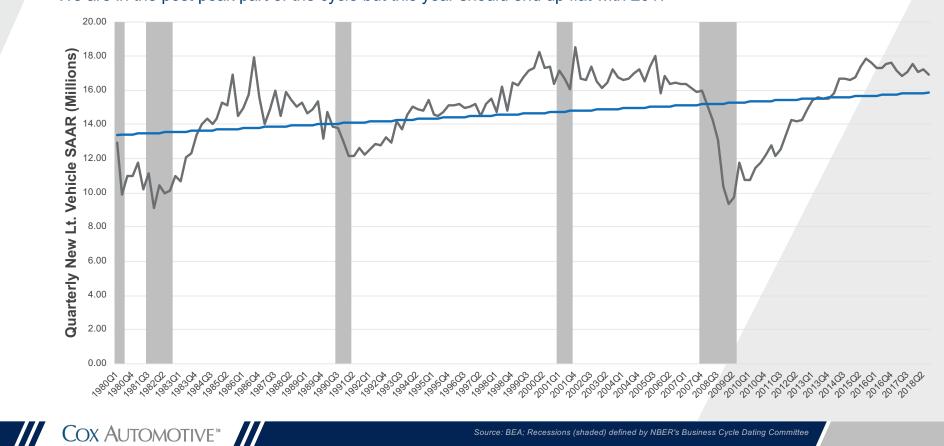


Cox Automotive[™]

Source: Source: Kelley Blue Book, Bobit, Bureau of Economic Analysis, IHS Markit

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#2 THE AUTO MARKET IS CYCLICAL AND TIED TO THE ECONOMIC CYCLE



We are in the post peak part of the cycle but this year should end up flat with 2017

#3: THE AUTO MARKET IS VERY DEPENDENT ON CREDIT

Auto Loan Origination \$ by Credit Score 660-719 720-759 760+ 620% <620 620-659 \$180.0 35.0% \$160.0 30.0% \$140.0 25.0% \$120.0 20.0% suoillia \$80.0 \$80.0 15.0% \$60.0 10.0% \$40.0 5.0% \$20.0 \$0.0 0.0% 04:01 04:02 04:03 04:04 05:01 05:02 05:04 05:02 05:04 06:02 06:02 06:03 06:03 07:Q2 07:Q3 15:Q1 15:Q2 15:Q3 16:02 16:03 16:04 18:Q2 18:Q3 07:Q4 08:Q2 09:02 09:Q3 09:Q4 0:02 0:03 0:0 40 2:Q3 3:02 3:Q3 13:Q4 4:02 4:Q3 4:Q4 5:Q4 08:Q1 08:Q3 08:Q4 09:Q1 10:Q1 <u>8</u> ŝ 14:Q1 7:02 17:Q4 18:Q1 ğ 8 2:Q1 8 2:Q4 3:Q1 6:Q1 7:Q1 7:Q3 Cox Automotive™ 11

Lending grew by 4.6% Y/Y in Q3 by 10% gains in subprime and 8% gains in 760+ \$ volumes

Source: New York Federal Reserve Consumer Credit Panel/Equifax

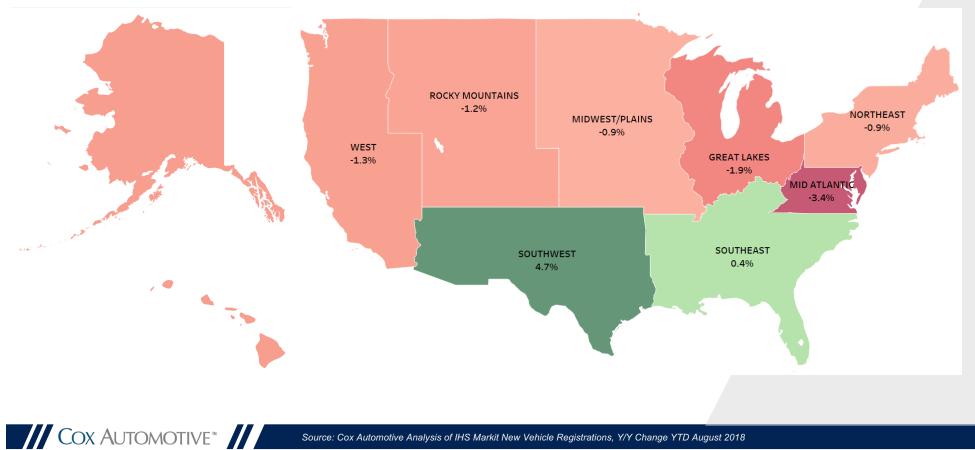
#4: LIKE HOUSING, DEMAND IS RATE SENSITIVE

The discount rate is up 1% while best available auto rates are up 1.3% year-over-year; up 2.4% from absolute low



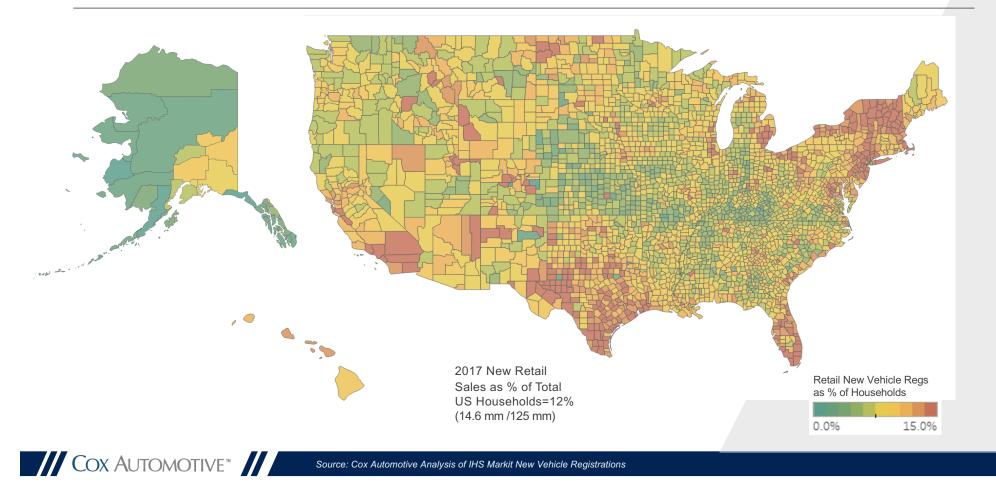
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#5 THE AUTO MARKET SEES BIG REGIONAL VARIATION

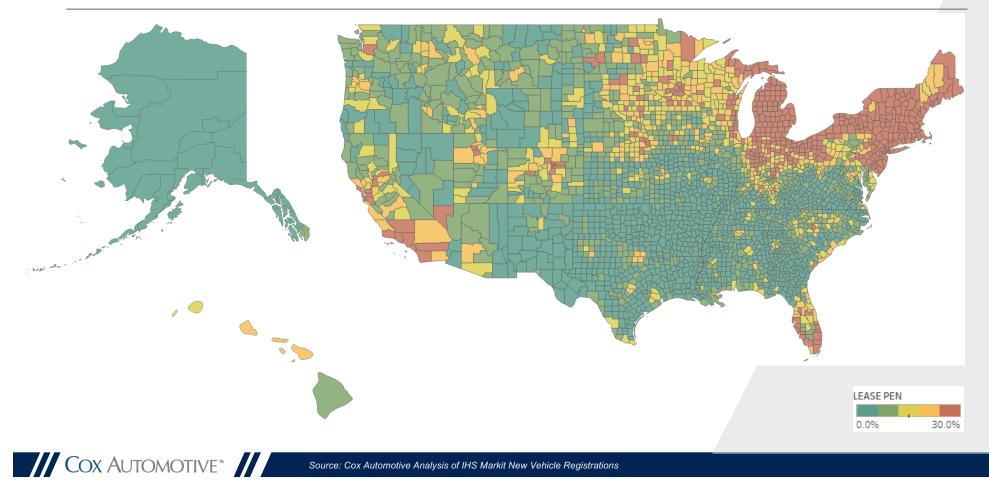


Source: Cox Automotive Analysis of IHS Markit New Vehicle Registrations, Y/Y Change YTD August 2018

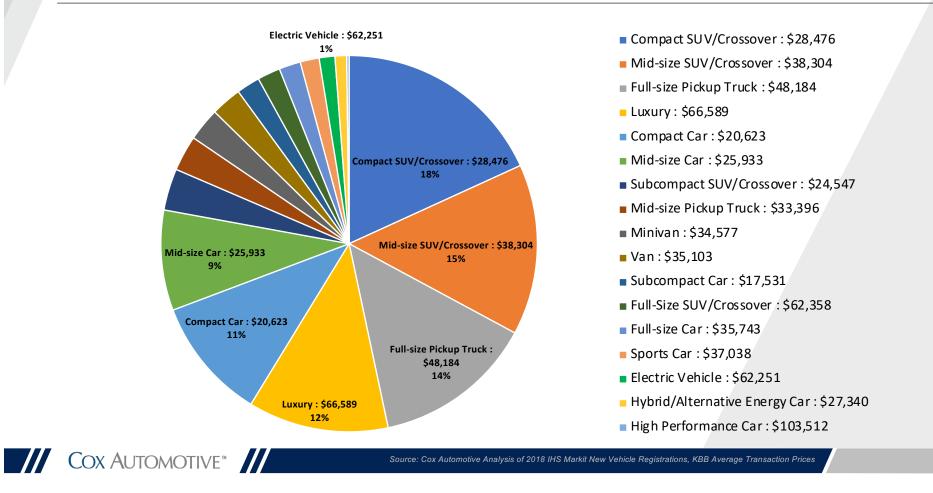
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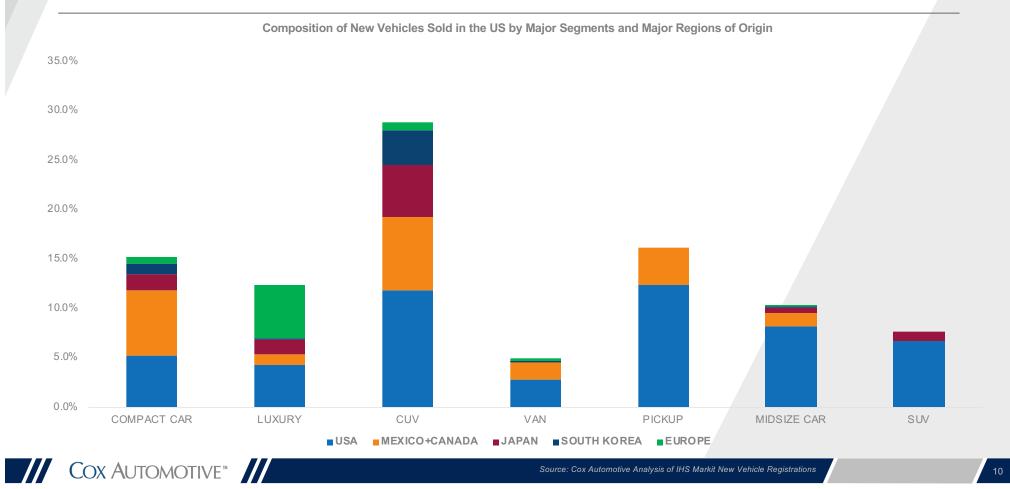
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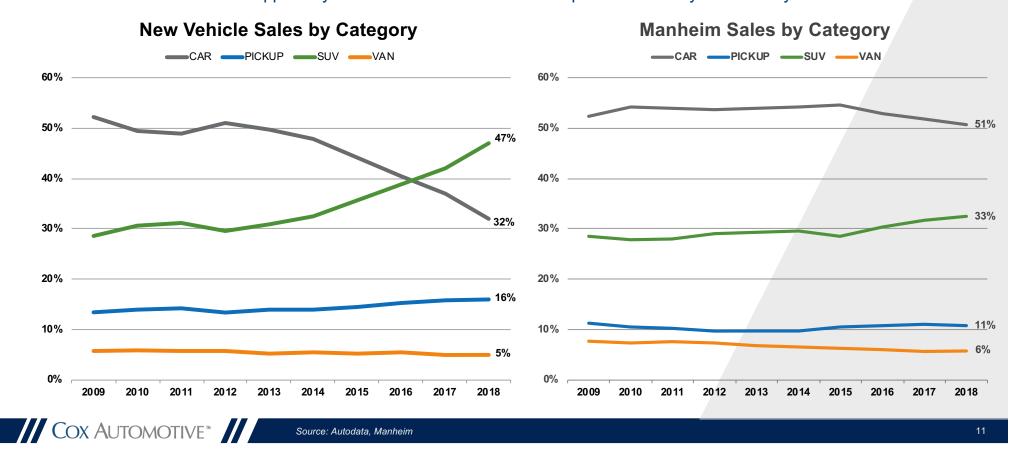
#6 THE MARKET HAS GREAT VARIETY IN PRODUCT



#7 THE MARKET IS DEPENDENT ON A GLOBAL SUPPLY CHAIN



#8 THE USED VEHICLE MARKET IS SUPPLIED BY A WHOLESALE MARKET



The wholesale market is supplied by the new vehicle market but composition can vary dramatically

#9 DEALERS SELL CARS

| #9 DEALERS SELL CARS | | | Q4 '18 | Q3 '18 | Q4 '17 | |
|--|-------|--|-------------------|---------|--------|----|
| | 1 | Market Conditions | 44% 🕇 | 37% | 44% | |
| | 2 | Credit Availability for Consumers | 36% | 35% | 33% | |
| What are the Factors Holding Back Dealers' Business? Significant decrease vs previous quarter | 3 | Limited Inventory | 35% | 38% | 27% | |
| | 4 | Competition | 33% | 35% | 36% | |
| | 5 | Expenses | 27% | 29% | 29% | |
| | 6 | Interest Rates | 23% 🕇 | 17% | 6% | |
| | 7 | Consumer Confidence | 19% | 16% | 19% | |
| | 8 | Consumer Transparency in Pricing | 12% | 15% | 15% | |
| | 9 | Staff Turnover | 11% | 12% | 11% | |
| | 10 | Credit Availability for Business | 8% | 9% | 8% | |
| Significant increase vs previous quarter | 11 | Regulations | 7% | 7% | 11% | |
| | 12 | Dealership Systems/Tools | 6% | 7% | 5% | |
| | 12 | Too Much Retail Inventory | 6% | 5% | 9% | |
| | 12 | Tariffs on Imported Vehicles and Parts | 6% | 5% | N/A | |
| | 15 | OEM Mandates/Restrictions | 5% | 5% | 5% | |
| | 16 | 2018 Tax Law Changes* | 2% | 2% | N/A | |
| COX AUTOMOTIVE *Wording updated in | Q4-18 | (from 2018 Tax Reform Plan) Deale | r Sentiment Index | Q4 2018 | | 12 |



ALL-STAR ATLANTA AUTOMOTIVE PANEL

Sandy Schwartz President Cox Automotive

Klaus Zellmer CEO Porsche USA Dietmar Exler CEO Mercedes-Benz USA

Larry Dominique President and CEO Peugeot North America

Cox Automotive*